AMENDMENTS TO THE CLAIMS

1.   (Currently Amended) A method comprising:

in a global operating system environment controlled by a single operating system kernel instance, establishing a <u>first</u> non-global zone ~~for isolating processes from processes in other non-global zones~~ <u>and a second non-global zone</u>, wherein the <u>first</u> non-global zone has a unique <u>first</u> zone identifier <u>and the second non-global zone has a unique second zone identifier</u>;

receiving from a first process executing in association with the <u>first</u> non-global zone a ~~first~~ request to create a <u>first inter-process</u> communications <u>(IPC)</u> object<u>, wherein the first process provides a particular object identifier to be assigned to the first IPC object, and wherein the first process has the first zone identifier associated therewith</u>;

~~in response to receiving the first request,~~ creating a ~~communications~~ <u>first IPC</u> object, wherein the ~~communications object has the unique zone identifier of the first process associated therewith~~ <u>first zone identifier associated with the first process is associated with the particular object identifier to give rise to a first augmented identifier for the first IPC object</u>;

receiving from a second process <u>executing in association with the first non-global zone</u> a ~~second~~ request to ~~initiate communications using the communications~~ <u>access an IPC</u> object <u>having the particular object identifier assigned thereto, wherein the second process provides the particular object identifier, and wherein the second process has the first zone identifier associated therewith</u>;

~~in response to receiving the second request,~~ determining<u>, based upon the particular object identifier provided by the second process and the first zone identifier</u> ~~if the second process is associated with the non-global zone having the unique zone identifier of the~~

~~communications object~~ associated with the second process, that the second process is requesting access to the first IPC object; ~~and~~

~~denying the second request if the second process is not associated with the non-global zone having the unique zone identifier of the communications object~~

permitting the second process to access the first IPC object to communicate with the first process;

receiving from a third process executing in association with the second non-global zone a request to create a second IPC object, wherein the third process provides the same particular object identifier to be assigned to the second IPC object, and wherein the third process has the second zone identifier associated therewith;

creating a second IPC object, wherein the second zone identifier associated with the third process is associated with the particular object identifier to give rise to a second augmented identifier for the second IPC object;

receiving from a fourth process executing in association with the second non-global zone a request to access an IPC object having the particular object identifier assigned thereto, wherein the fourth process provides the particular object identifier, and wherein the fourth process has the second zone identifier associated therewith;

determining, based upon the particular object identifier provided by the fourth process and the second zone identifier associated with the fourth process, that the fourth process is requesting access to the second IPC object; and

permitting the fourth process to access the second IPC object to communicate with the third process;

thereby enabling processes in the first non-global zone and the second non-global zone to use the same particular object identifier for inter-process communication without collision.

2-3.　　Canceled

4.　　(Currently Amended)　The method of claim ~~3~~ 1, wherein the ~~communications~~ particular object identifier comprises at least one of an address, a socket identifier, a port, a flex address, a semaphore identifier, a message queue identifier, a shared memory segment identifier, a pipe and a stream identifier.

5.　　(Currently Amended)　The method of claim 1, wherein establishing ~~a~~ the first non-global zone ~~for isolating processes from processes in other non-global zones further~~ comprises:

creating ~~a~~ the first non-global zone;

associating ~~a unique~~ the first zone identifier with the first non-global zone; and

creating a data structure for managing information ~~about communications~~ pertaining to IPC objects associated with the first non-global zone.

6.　　(Currently Amended)　~~The method of claim 1, wherein receiving from a second process a request to initiate communications using the communications object comprises receiving a request from a requestor process in a first non-global zone to communicate with a recipient process in a second non-global zone, the method further~~ A method comprising:

in a global operating system environment controlled by a single operating system kernel instance, establishing a first non-global zone and a second non-global zone;

receiving a request from a requestor process in the first non-global zone to communicate with a recipient process in the second non-global zone;

retrieving credentials for the requestor process, ~~the credentials comprising a zone identifier indicating a non-global zone to which the requestor process is bound~~;

verifying, based upon the credentials, that the requestor process is authorized to communicate with the recipient process across a non-global zone boundary ~~based upon the credentials~~; and

establishing a communication path between the requestor process and the recipient process ~~via the global operating system environment~~ if the requestor process is authorized to communicate with the recipient process, wherein the communication path is established using a process that is resident in the global operating system environment.

7.   (Currently Amended) The method of claim 1, wherein the ~~communications~~ first IPC object comprises at least one of a loopback transport provider, a semaphore, a shared memory segment, a message queue and an event channel.

8-12.   Canceled

13.   (Currently Amended) A computer readable storage medium, comprising:

instructions for causing one or more processors to establish, in a global operating system environment controlled by a single operating system kernel instance, a first non-global zone ~~for isolating processes from processes in other non-global zones in an operating~~

~~system environment controlled by a single operating system kernel instance~~ and a second non-global zone, wherein the <u>first</u> non-global zone has a unique <u>first</u> zone identifier <u>and the second non-global zone has a unique second zone identifier</u>;

instructions for causing one or more processors to receive from a first process executing in association with the <u>first</u> non-global zone a ~~first~~ request to create a <u>first inter-process</u> communications <u>(IPC)</u> object<u>, wherein the first process provides a particular object identifier to be assigned to the first IPC object, and wherein the first process has the first zone identifier associated therewith</u>;

instructions for causing one or more processors to create a <u>first IPC</u> ~~communications~~ object, ~~in response to receiving the first request,~~ wherein the ~~communications object has the unique zone identifier of the first process associated therewith~~ <u>first zone identifier associated with the first process is associated with the particular object identifier to give rise to a first augmented identifier for the first IPC object</u>;

instructions for causing one or more processors to receive from a second process <u>executing in association with the first non-global zone</u> a ~~second~~ request to ~~initiate communications using the communications~~ <u>access an IPC</u> object <u>having the particular object identifier assigned thereto, wherein the second process provides the particular object identifier, and wherein the second process has the first zone identifier associated therewith</u>;

instructions for causing one or more processors to determine, ~~in response to receiving the second request, if the second process is associated with the non-global zone having the unique zone identifier of the communications object~~ <u>based upon the particular object identifier provided by the second process and the first zone identifier associated with the second process, that the second process is requesting access to the first IPC object</u>; ~~and~~

instructions for causing one or more processors to ~~deny the second request if the~~ ~~second process is not associated with the non-global zone having the unique zone identifier~~ ~~of the communications object~~ permit the second process to access the first IPC object to communicate with the first process;

instructions for causing one or more processors to receive from a third process executing in association with the second non-global zone a request to create a second IPC object, wherein the third process provides the same particular object identifier to be assigned to the second IPC object, and wherein the third process has the second zone identifier associated therewith;

instructions for causing one or more processors to create a second IPC object, wherein the second zone identifier associated with the third process is associated with the particular object identifier to give rise to a second augmented identifier for the second IPC object;

instructions for causing one or more processors to receive from a fourth process executing in association with the second non-global zone a request to access an IPC object having the particular object identifier assigned thereto, wherein the fourth process provides the particular object identifier, and wherein the fourth process has the second zone identifier associated therewith;

instructions for causing one or more processors to determine, based upon the particular object identifier provided by the fourth process and the second zone identifier associated with the fourth process, that the fourth process is requesting access to the second IPC object; and

instructions for causing one or more processors to permit the fourth process to access the second IPC object to communicate with the third process;

thereby enabling processes in the first non-global zone and the second non-global zone to use the same particular object identifier for inter-process communication without collision.

14-15. Canceled

16.   (Currently Amended) The computer readable storage medium of claim ~~15~~ 13, wherein ~~a communications~~ the particular object identifier comprises at least one of an address, a socket identifier, a port, a flex address, a semaphore identifier, a message queue identifier, a shared memory segment identifier, a pipe and a stream identifier.

17.   (Currently Amended) ~~A~~ The computer readable storage medium of claim 13, wherein the instructions for causing one or more processors to establish ~~a~~ the first non-global zone ~~for isolating processes from processes in other non-global zones further~~ comprises:

instructions for causing one or more processors to create ~~a~~ the first non-global zone;

instructions for causing one or more processors to associate ~~a unique~~ the first zone identifier with the first non-global zone; and

instructions for causing one or more processors to create a data structure for managing information ~~about communications~~ pertaining to IPC objects associated with the first non-global zone.

18.   (Currently Amended) A computer readable storage medium ~~of claim 13, wherein instructions for causing one or more processors to receive from a second process a~~

~~request to initiate communications using the communications object comprises instructions for causing one or more processors to receive a request from a requestor process in a first non-global zone to communicate with a recipient process in a second non-global zone, the computer readable medium further~~ comprising:

<u>instructions for causing one or more processors to establish, in a global operating system environment controlled by a single operating system kernel instance, a first non-global zone and a second non-global zone;</u>

<u>instructions for causing one or more processors to receive a request from a requestor process in the first non-global zone to communicate with a recipient process in the second non-global zone;</u>

instructions for causing one or more processors to retrieve credentials for the requestor process~~, the credentials comprising a zone identifier indicating a non-global zone to which the requestor process is bound~~;

instructions for causing one or more processors to verify<u>, based upon the credentials,</u> that the requestor process is authorized to communicate with the recipient process across a non-global zone boundary ~~based upon the credentials~~; and

instructions for causing one or more processors to establish a communication path between the requestor process and the recipient process ~~via the global operating system environment~~ if the requestor process is authorized <u>to communicate with the recipient process, wherein the communications path is established using a process that is resident in the global operating system environment.</u>

19.   (Currently Amended) ~~A~~ The computer readable storage medium of claim 13, wherein the ~~communications~~ first IPC object comprises at least one of a loopback transport provider, a semaphore, a shared memory segment, a message queue and an event channel.

20-24. Canceled

25.   (Currently Amended) An apparatus, comprising:

~~means for establishing a non-global zone for isolating processes from processes in other non-global zones in a global operating system environment controlled by a single operating system kernel instance, wherein the non-global zone has a unique zone identifier;~~

~~means for receiving from a first process executing in association with the non-global zone a first request to create a communications object;~~

~~means for creating a communications object, in response to receiving the first request, wherein the communications object has the unique zone identifier of the first process associated therewith;~~

~~means for receiving from a second process a second request to initiate communications using the communications object;~~

~~means for determining, in response to receiving the second request, if the second process is associated with the non-global zone having the unique zone identifier of the communications object; and~~

~~means for denying the second request if the second process is not associated with the non-global zone having the unique zone identifier of the communications object~~

means for establishing, in a global operating system environment controlled by a single operating system kernel instance, a first non-global zone and a second non-global

zone, wherein the first non-global zone has a unique first zone identifier and the second non-global zone has a unique second zone identifier;

    means for receiving from a first process executing in association with the first non-global zone a request to create a first inter-process communications (IPC) object, wherein the first process provides a particular object identifier to be assigned to the first IPC object, and wherein the first process has the first zone identifier associated therewith;

    means for creating a first IPC object, wherein the first zone identifier associated with the first process is associated with the particular object identifier to give rise to a first augmented identifier for the first IPC object;

    means for receiving from a second process executing in association with the first non-global zone a request to access an IPC object having the particular object identifier assigned thereto, wherein the second process provides the particular object identifier, and wherein the second process has the first zone identifier associated therewith;

    means for determining, based upon the particular object identifier provided by the second process and the first zone identifier associated with the second process, that the second process is requesting access to the first IPC object;

    means for permitting the second process to access the first IPC object to communicate with the first process;

    means for receiving from a third process executing in association with the second non-global zone a request to create a second IPC object, wherein the third process provides the same particular object identifier to be assigned to the second IPC object, and wherein the third process has the second zone identifier associated therewith;

means for creating a second IPC object, wherein the second zone identifier associated with the third process is associated with the particular object identifier to give rise to a second augmented identifier for the second IPC object;

means for receiving from a fourth process executing in association with the second non-global zone a request to access an IPC object having the particular object identifier assigned thereto, wherein the fourth process provides the particular object identifier, and wherein the fourth process has the second zone identifier associated therewith;

means for determining, based upon the particular object identifier provided by the fourth process and the second zone identifier associated with the fourth process, that the fourth process is requesting access to the second IPC object; and

means for permitting the fourth process to access the second IPC object to communicate with the third process;

thereby enabling processes in the first non-global zone and the second non-global zone to use the same particular object identifier for inter-process communication without collision.

26-27. Canceled

28.   (New) An apparatus comprising:

means for establishing, in a global operating system environment controlled by a single operating system kernel instance, a first non-global zone and a second non-global zone;

means for receiving a request from a requestor process in the first non-global zone to communicate with a recipient process in the second non-global zone;

means for retrieving credentials for the requestor process;

means for verifying, based upon the credentials, that the requestor process is authorized to communicate with the recipient process across a non-global zone boundary; and

means for establishing a communication path between the requestor process and the recipient process if the requestor process is authorized to communicate with the recipient process, wherein the communication path is established using a process that is resident in the global operating system environment.